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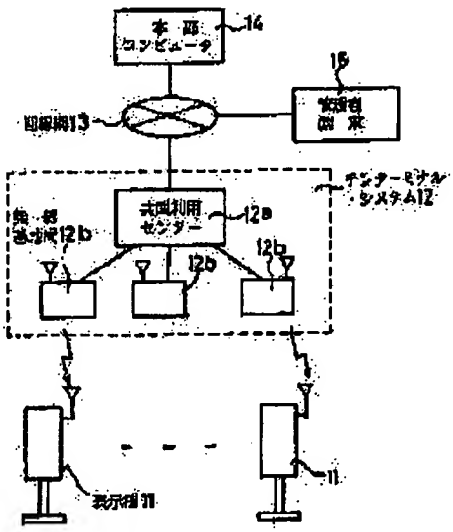
(54) REMOTE CONTROLLED DISPLAY DEVICE

(57)Abstract:

PURPOSE: To freely change the display contents of the display devices provided at each area at a remote point and at any time by adding a display device to a radio receiver which receives the display data.

CONSTITUTION: A remote controlled display device consists of a display devices 11 provided with the radio receivers set at each prescribed area, a teleterminal system 12 which includes a common center 12a which transmits the data to the devices 11 and a radio base station 12b, a central computer 14, and a supervisor terminal 15 which changes the display contents. In such a constitution, the terminal 15 inputs the data on the codes of each device 11 and each area, the display time, etc., and transmits the display contents to be changed to the computer 14. The computer 14 transmits the data to each device 11 via the system 12 based on the contents received from the terminal 15. The device 11 receives the changed contents and displays these contents at a designated time.



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(54) [Title of the Invention] Display device employing remote control

(57) [Abstract]

[Purpose] To provide a remote control display which enables free modification of the displayed contents of displays placed in different regions at any time from a remote location through wireless communication.

[Configuration] A display comprising wireless reception equipment is placed for use in store product advertising, and receives display data from a display contents modification portion which performs central management via a tele-terminal system.

[Scope of Claims]

[Claim 1] A display device employing remote control, characterized in that a display comprises a wireless receiver to receive display data.

[Claim 2] The display device employing remote control according to Claim 1, characterized in that said display comprising a wireless receiver is placed for use in store product advertising, and receives display data from a display contents modification portion which performs central management via a tele-terminal system.

[Detailed Description of the Invention]

[0001]

[Industrial Field of the Invention] This invention

relates to a display device employing remote control, which modifies the displayed contents of a display in a remote location.

[0002]

[Prior Art] In the past, for example in supermarkets and similar, LED (light-emitting diode) displays and similar have been used for promotion and advertising of various products. As shown in Fig. 5, this type of display comprises a central processing unit (CPU) 1; P-ROM (programmable read-only memory) or other ROM 2, connected to the CPU 1, and which stores fixed display contents; RAM (random access memory) 3 to store temporary data; a display control portion 4; and an LED or other display portion 5. Display contents stored in ROM 2 are repeatedly read and caused to be displayed on the display portion 5.

[0003]

[Problems to be Solved by the Invention] In a conventional LED display, display contents are stored in ROM 2, so that when the display contents are modified, new display contents must be input separately to each display, or a ROM 2 in which are stored new display contents must be substituted, so that labor is entailed in modification of display contents, and it has not been possible to make modifications freely and in real time. Consequently it has been difficult, for example, to promote and advertise specific products during evening

shopping or similar with good timing, or to provide finely detailed promotion and advertising of products in different regions or in keeping with different times.

[0004] Hence an object of this invention is to provide a remote control display which enables free modification of the displayed contents of displays placed in different regions at any time from a remote location through wireless communication.

[0005]

[Means to Solve the Problem] In order to attain the above object, a display device employing remote control comprises, in a display, a wireless receiver to receive display data. Further, in a display device employing remote control, the display comprising a wireless receiver is placed for use in store product advertising, and receives display data from a display contents modification portion which performs central management via a tele-terminal system.

[0006]

[Action] According to this invention, a display comprises a wireless receiver which receives display data, so that the display can be changed simply in real time. Further, a display comprising a wireless receiver is placed for advertisement of products in a store, and by receiving display data from a display contents modification portion which performs central management via a tele-terminal system, the display contents of

displays placed in different regions can be freely modified at any time from a remote location, so that promotion and advertising with good timing, and promotion and advertising in different regions or in keeping with different times, can be provided.

[0007]

[Embodiments] Below, the invention is explained more specifically by means of an illustrated embodiment. Fig. 1 is a figure used to explain the display device employing remote control of an embodiment of the invention.

[0008] In the figure, the remote control display device employing wireless communication of this embodiment comprises displays 11, comprising a wireless receiver, which are placed in each prescribed region; a tele-terminal system 12, comprising a common-use center 12a and a wireless base station 12b which perform wireless data transmission to the displays 11; a main unit computer 14, connected via a circuit network 13 to the common-use center 12a of this tele-terminal system 12, which transmits display contents to each of the displays 11; and a manager terminal 15, to perform modification and management of display contents. In the manager terminal 15, modification display contents are transmitted to the main unit computer 14 with region codes, display times, and other data input for each display 11. The main unit computer 14 performs data

transmission, via the tele-terminal system 12, to each display 11 according to the contents transmitted from the manager terminal 15. Upon receiving modification contents, a display 11 displays the modification contents at the specified times.

[0009] Fig. 2 is a block diagram explaining the configuration of a display comprising a wireless reception device of this embodiment of the invention, and Fig. 3 is a perspective view showing the external appearance of a display comprising a wireless reception device of this embodiment of the invention.

[0010] In Fig. 2, the above display 11 is for example a display employing LEDs as display elements, and comprises a CPU 16, RAM 17 which stores display contents transmitted from the main unit computer 14, temporarily recorded data and similar, a display control portion 18 which controls display contents data, display portion 19, and wireless reception device 20. This wireless reception device 20 comprises a reception portion 21, which receives wireless data sent from the wireless base station 12b; a communication control portion 22, which controls communication data between the reception portion 21 and CPU 16; and an antenna 23. In Fig. 3, the display 11 of this embodiment is for example a tall display main unit 24 stood upright by a stand 25, on the rear face of which is mounted an antenna 23 to receive wireless data; the display content may for example be scrolled

continuously and repetitively in sequence.

[0011] Fig. 4 is a flowchart which explains operations at the manager terminal of the display employing wireless communication in this embodiment of the invention.

[0012] In the figure, first, at the manager terminal 15, the display content for modification, codes for each display, region codes, display times, and other data is input (ST1). Next, this input data is converted into a transmission format for transmission by wireless means (ST2). Next, this data, converted into the converted format, is transmitted to the main unit computer 14 via the circuit network 13 (ST3). Data received by the main unit computer 14 is transmitted to displays 11 in different regions via the circuit network 13 and tele-terminal system 12, according to the contents of instructions sent from the main unit computer 14.

[0013] According to the above configuration, display contents for modification, codes for each display, region codes, display times, and other data which has been input at the manager terminal 15 is transmitted from the main unit computer 14, via the circuit network 13 and tele-terminal system 12, to the displays 11 in each region, and in the displays 11, is received by the wireless reception devices 20 and stored in RAM 17; then, the data is read at prescribed times under the control of the CPUs 16 and is displayed on the display portions 19 under the control of the display control portions 18, so that the

display contents can be freely modified from a remote location in real time. Hence if such displays 11 are placed in a supermarket, promotion and advertising of specific products can be performed with good timing during evening shopping or similar, or finely detailed promotion and advertising of products in different regions or in keeping with different times is possible. Using conventional displays, the contents stored in ROM are displayed, and so in order to modify the display contents the ROM had to be changed; but in this embodiment there is no such need, and the display contents can be modified simply at any time.

[0014] In the above embodiment, an explanation was given in which modification contents input at the manager terminal 15 are transmitted to the main unit computer 14, and then from this main unit computer 14 to each of the displays 11; but it is sufficient that, at least, the display contents be transmitted from the display contents modification portion which performs central management, via the tele-terminal system 12, and configurations are not limited to that of this embodiment.

[0015] Moreover, an example was explained in which LEDs were used as the display elements of displays 11; but other configurations are possible, and various electronic display devices can be used, such as plasma displays, fluorescent display tubes, liquid crystal displays, and similar; moreover, the shape of the display is not

limited to displays provided on a stand, and of course displays such as electro-optical signboards may also be used.

[0016]

[Advantageous Results of the Invention] As explained above, according to this invention, modification contents input by a display contents modification portion are transmitted via a tele-terminal system, and are received by each display device, comprising a wireless receiver, placed in different regions, so that there are the advantageous results that the display contents can be modified freely in real time from a remote location, promotions and advertising can be performed with good timing, and finely detailed promotion and advertising of products can be provided in different regions or in keeping with different times.

[Brief Description of the Drawings]

Fig. 1: A figure explaining a display device using remote control in an embodiment of the invention.

Fig. 2: A block diagram explaining the configuration of a display comprising a wireless reception device in an embodiment of the invention.

Fig. 3: A perspective view showing the external appearance of a display comprising a wireless reception device in an embodiment of the invention.

Fig. 4: A flowchart explaining operations at the manager

terminal for displays using wireless communication in an embodiment of the invention.

Fig. 5: A block diagram explaining the configuration of a display of the prior art.

[Explanation of Symbols]

11 Display

12 Tele-terminal system

12a Common-use center

12b Wireless base station

13 Circuit network

14 Main unit computer

15 Manager terminal

16 CPU

17 RAM

18 Display control portion

19 Display portion

20 Wireless reception device

21 Reception portion

22 Communication control portion

23 Antenna